

# PATENT COOPERATION TREATY

REC'D 22 JUN 2005

WIPO

PCT

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/B2005/051213

International filing date (day/month/year)  
13.04.2005

Priority date (day/month/year)  
20.04.2004

International Patent Classification (IPC) or both national classification and IPC  
H04R1/28

Applicant  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Kunzelmann, C

Telephone No. +49 89 2399-2834



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051213

---

**Box No. 1 Basis of the opinion**

---

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051213

---

**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

**1. Statement**

Novelty (N)	Yes: Claims	1-5,7,9
	No: Claims	6,8
Inventive step (IS)	Yes: Claims	1-5
	No: Claims	7,9
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1) PRIOR ART (Rule 64.1 PCT):**

Reference is made to the following documents:

- D1: FR-A-2 680 295 (TSAO YE MING) 12 February 1993 (1993-02-12)
- D2: DE 44 10 995 A1 (SOCIETE D'APPLICATIONS GENERALES D'ELECTRICITE ET DE MECANIQUE SAGEM,) 6 October 1994 (1994-10-06)
- D3: DE 200 18 241 U1 (SCHMITT, FRANZ; CZECH, ANDREAS; KNAPP, FRIEDRICH; AHRENS, HANS-JOACHIM) 28 February 2002 (2002-02-28)
- D4: US 4 146 744 A (VERANTH) 27 March 1979 (1979-03-27)
- D5: US 4 885 782 A (EBERBACH) 5 December 1989 (1989-12-05)

**2) NOVELTY I (Article 33(2) PCT):**

- 2.1 Document D1 is considered to represent the nearest prior art, in particular for the portable speaker device of claims 6 - 9.

This document D1 discloses a portable speaker device (see page 1, line 15 - page 2, line 7), comprising:

- a front mounting plate (13', see Figure 5 and page 4, lines 17 - 23) having an opening for sound transmission (the opening covered by grille 12, see Figure 5);
- a loudspeaker fixedly secured to the front mounting plate for broadcasting through the opening (see Figure 5 and page 4, lines 18 - 24);
- a rear mounting plate (for mounting a ring 41, see Figure 5 and page 5, lines 7 - 10) extending substantially parallel to the front mounting plate;
- an enclosure body (10 or 11, see Figures 2 - 4), which is formed by a plurality of separate ring-shaped enclosure members (22, 23, 24) which are axially

movable with regard to each other, of which members a front member (21) is secured to the front mounting plate (13') in surround relation to the loudspeaker (see Figure 5), and a rear member (24) is secured to the rear mounting plate (in that the rear member is integrally formed with the rear mounting plate, see Figure 5), wherein in a non-operational position of the speaker device the mounting plates extend closely to each other, the enclosure body being in a collapsed condition, wherein in an operational position of the speaker device the mounting plates extend distantly to each other (see page 4, line 17 - page 5, line 35, in particular page 5, lines 13 - 35 and compare Figures 3 and 4), the enclosure body being in an extended condition (shown in Figures 4 and 5) and forming a sound cabinet (see page 2, lines 3 - 14) and wherein the enclosure members have essentially the form of truncated cone-shaped bodies (see page 5, lines 18 - 30) having their top portions directed to the one of the mounting plates and their bottom portions directed to the other mounting plate.

2.2 The portable speaker device of **claim 6**, therefore, is not new (Article 33(2) PCT).

2.3 The feature of **claim 8** is also known from document D1 (see page 5, lines 10 - 12). The portable speaker device of claim 8, therefore, is not new, either.

### 3) INVENTIVE STEP I (Article 33(3) PCT):

3.1 The feature introduced in **claim 7** is known in the given technical field: It is known for instance from document D4 (see the embodiment of Figure 9) that two loudspeakers can be arranged in a common resonant enclosure, thereby increasing the acoustic power radiated. The portable speaker device of claim 7, therefore, does not involve an inventive step (Article 33(3) PCT).

3.1 The feature of **claim 9** is also well-known in the given context of portable speaker devices, since it is common general knowledge that several loudspeakers, active in different frequency ranges, may be used to reproduce more accurately audio signals in a broad frequency range. One example of such a loudspeaker arrangement is disclosed in document D5. Thus, familiar with the teaching of document D1 and faced

with the problem of faithfully reproducing a broad frequency range, the person skilled in the art would in an obvious manner have used for instance the teaching of document D4 and have provided an additional speaker, or additional speakers, for dedicated frequency ranges. The portable speaker device of claim 9, therefore, does not involve an inventive step (Article 33(3) PCT).

**4) NOVELTY AND INVENTIVE STEP II (Articles 33(2), (3) PCT):**

4.1 Concerning **claim 1** and its dependent claims, document D1 is also considered to represent the nearest state of the art.

4.2 The portable speaker device of claim 1 differs from the one known from document D1 in that the rear members of each extendable/collapsible enclosure body are secured to the rear mounting plate. Hence, the rear mounting plate is a common mounting plate for both enclosure bodies. In document D1, there is an individual mounting plate for each enclosure body.

Thus, the portable speaker device of claim 1 is novel (Article 33(2) PCT).

4.3 This differing feature has the technical effect of particularly easy handling, since both enclosures can be brought to their extended or collapsed state with a single movement. Furthermore, the whole speaker device may be particularly compact, as it needs only one front mounting plate and one rear mounting plate, which, when appropriately shaped, may form a complete housing (see page 2, lines 6 - 19). In the speaker device of document D1, the person skilled in the art would not consider such a common mounting plate for both enclosure bodies. Document D1 relies on a pivotal attachment of the two speaker enclosures to a central unit which allows a compact structure (see Figures 1 to 3). The whole functioning of this pivotal attachment of the speaker device of document D1 would become impossible if the two rear mounting plates were made common.

Thus, it would not be obvious for the person skilled in the art to provide a common rear mounting plate to the portable speaker system of document D1.

The other available documents (D2 and D3) are less relevant and reflect the technical

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/IB2005/051213

background that telescopically extendable resonance cavities are well-known in different applications or uses of speakers.

Therefore, an inventive step is acknowledged for the portable speaker device of claim 1.

- 4.4 For the dependent claims 2 - 5, novelty and inventive step are acknowledged because of their dependency on claim 1.

**5) INDUSTRIAL APPLICABILITY (Article 33(4) PCT):**

- 5.1 The industrial applicability of the claimed subject-matter is clear.



# PATENT COOPERATION TREATY

REC'D 22 JUN 2005

WIPO

PCT

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

see form PCT/ISA/220

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/B2005/051213

International filing date (day/month/year)  
13.04.2005

Priority date (day/month/year)  
20.04.2004

International Patent Classification (IPC) or both national classification and IPC  
H04R1/28

Applicant  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

#### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

#### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

#### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Kunzelmann, C

Telephone No. +49 89 2399-2834





**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051213

---

**Box No. I Basis of the opinion**

---

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/051213

---

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

**1. Statement**

Novelty (N)	Yes: Claims	1-5,7,9
	No: Claims	6,8
Inventive step (IS)	Yes: Claims	1-5
	No: Claims	7,9
Industrial applicability (IA)	Yes: Claims	1-9
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1) PRIOR ART (Rule 64.1 PCT):**

Reference is made to the following documents:

- D1: FR-A-2 680 295 (TSAO YE MING) 12 February 1993 (1993-02-12)
- D2: DE 44 10 995 A1 (SOCIETE D'APPLICATIONS GENERALES D'ELECTRICITE ET DE MECANIQUE SAGEM,) 6 October 1994 (1994-10-06)
- D3: DE 200 18 241 U1 (SCHMITT, FRANZ; CZECH, ANDREAS; KNAPP, FRIEDRICH; AHRENS, HANS-JOACHIM) 28 February 2002 (2002-02-28)
- D4: US 4 146 744 A (VERANTH) 27 March 1979 (1979-03-27)
- D5: US 4 885 782 A (EBERBACH) 5 December 1989 (1989-12-05)

**2) NOVELTY I (Article 33(2) PCT):**

- 2.1 Document D1 is considered to represent the nearest prior art, in particular for the portable speaker device of claims 6 - 9.

This document D1 discloses a portable speaker device (see page 1, line 15 - page 2, line 7), comprising:

- a front mounting plate (13', see Figure 5 and page 4, lines 17 - 23) having an opening for sound transmission (the opening covered by grille 12, see Figure 5);
- a loudspeaker fixedly secured to the front mounting plate for broadcasting through the opening (see Figure 5 and page 4, lines 18 - 24);
- a rear mounting plate (for mounting a ring 41, see Figure 5 and page 5, lines 7 - 10) extending substantially parallel to the front mounting plate;
- an enclosure body (10 or 11, see Figures 2 - 4), which is formed by a plurality of separate ring-shaped enclosure members (22, 23, 24) which are axially

movable with regard to each other, of which members a front member (21) is secured to the front mounting plate (13') in surround relation to the loudspeaker (see Figure 5), and a rear member (24) is secured to the rear mounting plate (in that the rear member is integrally formed with the rear mounting plate, see Figure 5), wherein in a non-operational position of the speaker device the mounting plates extend closely to each other, the enclosure body being in a collapsed condition, wherein in an operational position of the speaker device the mounting plates extend distantly to each other (see page 4, line 17 - page 5, line 35, in particular page 5, lines 13 - 35 and compare Figures 3 and 4), the enclosure body being in an extended condition (shown in Figures 4 and 5) and forming a sound cabinet (see page 2, lines 3 - 14) and wherein the enclosure members have essentially the form of truncated cone-shaped bodies (see page 5, lines 18 - 30) having their top portions directed to the one of the mounting plates and their bottom portions directed to the other mounting plate.

2.2 The portable speaker device of **claim 6**, therefore, is not new (Article 33(2) PCT).

2.3 The feature of **claim 8** is also known from document D1 (see page 5, lines 10 - 12). The portable speaker device of claim 8, therefore, is not new, either.

### 3) INVENTIVE STEP I (Article 33(3) PCT):

3.1 The feature introduced in **claim 7** is known in the given technical field: It is known for instance from document D4 (see the embodiment of Figure 9) that two loudspeakers can be arranged in a common resonant enclosure, thereby increasing the acoustic power radiated. The portable speaker device of claim 7, therefore, does not involve an inventive step (Article 33(3) PCT).

3.1 The feature of **claim 9** is also well-known in the given context of portable speaker devices, since it is common general knowledge that several loudspeakers, active in different frequency ranges, may be used to reproduce more accurately audio signals in a broad frequency range. One example of such a loudspeaker arrangement is disclosed in document D5. Thus, familiar with the teaching of document D1 and faced

with the problem of faithfully reproducing a broad frequency range, the person skilled in the art would in an obvious manner have used for instance the teaching of document D4 and have provided an additional speaker, or additional speakers, for dedicated frequency ranges. The portable speaker device of claim 9, therefore, does not involve an inventive step (Article 33(3) PCT).

**4) NOVELTY AND INVENTIVE STEP II (Articles 33(2), (3) PCT):**

- 4.1 Concerning **claim 1** and its dependent claims, document D1 is also considered to represent the nearest state of the art.
- 4.2 The portable speaker device of claim 1 differs from the one known from document D1 in that the rear members of each extendable/collapsible enclosure body are secured to the rear mounting plate. Hence, the rear mounting plate is a common mounting plate for both enclosure bodies. In document D1, there is an individual mounting plate for each enclosure body.
- Thus, the portable speaker device of claim 1 is novel (Article 33(2) PCT).
- 4.3 This differing feature has the technical effect of particularly easy handling, since both enclosures can be brought to their extended or collapsed state with a single movement. Furthermore, the whole speaker device may be particularly compact, as it needs only one front mounting plate and one rear mounting plate, which, when appropriately shaped, may form a complete housing (see page 2, lines 6 - 19). In the speaker device of document D1, the person skilled in the art would not consider such a common mounting plate for both enclosure bodies. Document D1 relies on a pivotal attachment of the two speaker enclosures to a central unit which allows a compact structure (see Figures 1 to 3). The whole functioning of this pivotal attachment of the speaker device of document D1 would become impossible if the two rear mounting plates were made common.

Thus, it would not be obvious for the person skilled in the art to provide a common rear mounting plate to the portable speaker system of document D1.

The other available documents (D2 and D3) are less relevant and reflect the technical

background that telescopically extendable resonance cavities are well-known in different applications or uses of speakers.

Therefore, an inventive step is acknowledged for the portable speaker device of claim 1.

- 4.4 For the dependent claims 2 - 5, novelty and inventive step are acknowledged because of their dependency on claim 1.

**5) INDUSTRIAL APPLICABILITY (Article 33(4) PCT):**

- 5.1 The industrial applicability of the claimed subject-matter is clear.